Jet Structure
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Tracking Review

- Useful to understand scope, timescales, deliverables, etc.
  - We will contribute with studies of tracking related performance relevant to our physics scope
    - Requires coordination with Simulations group and Upsilon TG
- Plan to repeat common-use MC sample model
  - Tracking performance in jets for FF measurements (where jet cone limits fake rate)
  - Tracking performance at all-p_T for missing-p_T or charged hadron spectra (possibly with calo-matching)
  - Other topics if resources allow/need is shown

MC Samples

- HepMC Pythia8 dijet events at /direct/phenix +upgrades/decadal/dvp/GeneratorInputFiles (kinematics chosen according to need):
  - R=0.4, pT=50-55 GeV, $|\eta|<0.6$
  - R=0.4, pT=60-65 GeV, $|\eta|<0.6$
  - R=0.2, pT=25-30 GeV, $|\eta|<0.9$
  - R=0.2, pT=30-35 GeV, $0.7<|\eta|<0.9$
- Additional samples will be created, however these span the range of available jet kinematics

Useful Tasks for Tracking Review

- Track-cluster matching
  - Past work showed some track purity could be regained at loss of efficiency
- Fake jet rejection via track, track-jet or cluster matching
  - Requires using the latest tracking configuration & clustering
- Flavor-dependence of jet performance
  - Evaluate separately for g vs. u/s/d vs. c vs. b (Overlap with the b-jet TG)
- Blind unfolding tests of modified jet spectra or FF
- Response to quenched jets
  - Interface JEWEL/PyQuen/QPythia with event generators and see if response is different

General Outlook

- Jet Structure will transition to work towards longer term payoff:
  - Develop reconstruction/analysis infrastructure in software
  - Benchmark detector performance with latest simulations & software updates
- However, we understand that the Tracking Review has a short time scale and will have priority